VI. Antenatal Care and Mother-Child Health Services

Antenatal Care Elements Necessary to Permit Adding Perinatal Intervention Activities

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It can be too easy to focus on the use of antiretrovirals for the prevention of mother-to-child HIV transmission and miss the greater context of this development. For example, a number of difficult issues are clearer since the results of the Thai study were released. Voluntary counseling and testing, which has been difficult to promote based on the results of evaluations of behavior change alone, has a much clearer indication for women now that we have something to offer–there is a need to promote voluntary counseling and testing to get access to treatment. Another issue is the role of breast-feeding in the context of HIV and AIDS, which has created much debate in international health circles in the past. Finally, this new development also has brought renewed attention to the provision of antenatal care, which, though defined in 1994, has not received the importance or attention from donors and countries that it deserves.

The Technical Working Group on Antenatal Care, which was convened in Geneva in 1994 by WHO, recommended a minimum of four antenatal care visits for pregnant women with a normal pregnancy. Healthy pregnant women who test positive for HIV before or during pregnancy would not necessarily require more frequent contacts with the health services than the recommended minimum for all pregnant women. They would, however, need more individualized care and counseling time.

We would like to see the woman at approximately 16 weeks of gestation so that we can inform her about the benefits of voluntary counseling and testing and can test hemoglobin levels. Then, maybe with rapid testing, the HIV testing can be done during the 16th week. Or, I think an important point, if the woman is not ready to do that, we could discuss it during the first visit and then bring her back for testing during the second visit; we also could try to encourage the partner to come with the woman, and we would discuss the test results and refer the woman early in pregnancy to appropriate support groups.

This also would give us time to discuss infant feeding options with the woman, which really is something that has been overlooked in the past during antenatal care, although it is a crucial component. If we think that we can address that at the time of delivery or postpartum, we actually will be too late.

In addition, testing during delivery will not give the woman time to reflect and accept her status before she starts with serious discussions where she needs to bring in the family. Making a decision about breast-feeding is not something that would be done in private; it is

something that would need to be discussed with one's family and partner.

When we are looking at this, we see how it can be implemented during the time of antenatal care, which is during these four contacts with the health system. But, unfortunately, there currently is a gap between what is recommended by WHO as the basic minimum level of antenatal, delivery, and postpartum care and what is available and accessible for pregnant women in most of the developing countries.

We are faced with a number of challenges which we must address to successfully introduce a strategy to reduce vertical transmission of HIV. As is the case with most HIV prevention activities, the need is greatest in those countries that are least able to afford it. We therefore must consider making these interventions available to women without diverting resources from other essential public health interventions for mothers and children. I think this is a very important point to remember when we are setting up these programs because we need to resolve some of the other obstetric complications and the referral mechanisms before we can do it.

Millions of women in developing countries lack access to adequate care during pregnancy. Only 65 percent of women in developing countries use antenatal care at least once during pregnancy, and less than 50 percent deliver with a skilled attendant. This makes me think of the alarm clock mentioned in earlier presentation–if a woman does not have a skilled attendant and must remember every third hour to take a pill, she probably is in need of many other things that are crucial to having a healthy child.

These low utilization rates are caused by a range of factors, such as distance from the health services; costs, including direct fees, transportation, drugs, and supplies; and, last but not least, women's lack of decision-making power within the family. Some of this low utilization is due to the quality of maternal and child health services. Poor quality of services, including poor treatment by health care providers, also makes some women reluctant to use services.

There have been some studies done related to quality of care; a recent one from Tanzania shows that women were aware of the advantages of antenatal care, particularly the advantages of delivering by a skilled attendant, and they saw it as very important. But the women in both Kenya and in Tanzania did not have the necessary means to access these services, and they were not able to decide on this themselves; they needed to negotiate this decision with their mothers-in-law or their partners, which is why they refrained from seeking care.

Another study from Zambia showed that women traveled long distances to access care, many traveling more than 2 hours to attend an antenatal clinic. The average waiting time was more than 2 hours, with less than 10 minutes spent with the health care providers. The care provided was of very low quality. One of the indicators for quality of care was that immunization against tetanus was not done routinely for those who needed two doses.

The researchers in the study conducted focus-group-type discussions and also went from house to house to seek those women who had not come back for follow-up care. The

women who did not return gave as their main reason that they had been poorly treated by the health care staff. Another reason, which I found quite interesting, was that they said that they could not afford to buy new clothes, and if they did not wear proper clothes the health care providers would not treat them with respect.

Since antenatal care is the entry point into antiretroviral therapy, clearly many women in developing countries will miss the opportunity to benefit from these interventions if measures are not taken to improve quality and coverage of care. Prevention of anemia at the time of delivery is one of the major goals of antenatal care. It is widely acknowledged that postpartum hemorrhage is one of the most common causes of maternal mortality, and anemia plays a major role in postpartum hemorrhage. Since we still are unclear about the impact of antiretroviral therapy on anemic women, a major effort must be made to ensure that women identified for treatment have satisfactory hemoglobin levels. In poor areas where the anemia prevalence is high, all pregnant women should be provided with iron/folate tablets; they should also receive malaria and hookworm prophylaxis in areas where these conditions are endemic.

Simple interventions such as this have been difficult to implement, as pregnant women tend to present too late in their pregnancy to benefit effectively from pre-delivery treatment. Furthermore, few facilities at the peripheral level have the necessary lab equipment to screen those women who would need referral.

Similar problems are likely to occur in implementing a strategy to reduce mother-to-child transmission. Initiation of a short-course antiretroviral regimen would require a hemoglobin estimation at enrollment. There also is a need for setting a criteria for or establishing a level for hemoglobin for those who are to be enrolled in the studies. To do so, sites would need the necessary equipment to do accurate hemoglobin measurements.

Changing care-seeking behaviors to bring women to antenatal care earlier should be a priority. Working with communities near the health services is clearly necessary. I think we all have been reminded of that by our colleague from Uganda in his earlier presentation.

The success of short-course antiretroviral therapy in reducing mother-to-child transmission has been shown effective only in non-breast-feeding populations. In an environment where breast-feeding is the norm, it may be difficult and expensive for women to choose alternatives. The financial costs of providing formula must be considered. In settings where mothers are unable to afford formula-feeding, a system for distribution will have to be organized.

There are certain requirements that would need to be fulfilled to ensure successful introduction of an antiretroviral strategy for pregnant women. These are, as I mentioned, quality antenatal, intrapartum, and postpartum care that is available and used; quality voluntary counseling and testing that is available, promoted, accepted, and used by pregnant women; health workers trained in prevention of mother-to-child transmission; well-organized services with good logistics, lab support, and referral systems; and supportive services for pregnant women and new mothers. I think it is important to see that some of

these requirements are dependent on the health system itself; others can be resolved through the intervention because quality voluntary counseling and testing and training of health workers will be part of the intervention. But the two others really are crucial to address before we are thinking of starting interventions.

As I stated earlier, mother-child health services are not easily accessible in their current capacity to deliver simple interventions such as immunization against tetanus and screening and treatment of congenital syphilis. But there is no doubt that the potential benefits of the reduction of HIV-infected infants are of great importance to countries with high HIV seroprevalence.

Mother-child health services therefore must be strengthened to deliver antiretroviral therapy. Without strong political will and commitment of all partners in health, it will, however, be difficult to ensure acuity in the coverage of interventions and a sustainable health care delivery.

Coming from WHO, I believe an important question you can ask is what are we doing presently to try to improve quality and coverage of antenatal, delivery, and postpartum care, including interventions to reduce vertical transmission. WHO is in the process of redefining minimum standards of care for reproductive health services, followed by development of training materials.

The first area of development focuses on antenatal and postpartum care, delivery care, and care of the sick newborn. These standards of care are intended for use at the most peripheral level of the health care system, both for the multipurpose health care workers at the first level facility and at the health center with labor and delivery beds.

The related tools under development are the essential care practice guides and the training materials that combine key case management and preventive interventions. The essential care practice guides and the training materials are modeled on the integrated management of childhood illnesses, which many of you are probably familiar with.

The generic essential care guidelines for antenatal and postpartum care include facilitating a referral for voluntary counseling and testing and support for alternatives to breast-feeding for HIV-infected women. These generic materials define what should be broadly available in most circumstances. Antiretroviral therapy will be in the adaptation of these guidelines for use in high-HIV-prevalent countries.

Clearly, policies endorsing these interventions need to be in place. Therefore, efforts to promote prevention of vertical transmission should include support for the entire package of essential practices for pregnancy and post-pregnancy support.

Implementation of the entire package of care requires training and extensive support for program implementation. Joint efforts by all partners in health will be required to ensure widespread implementation and program sustainability.

The challenge ahead of us is to ensure acuity in the distribution of essential pregnancy and post-pregnancy care, which will include antiretroviral therapy for the reduction of vertical transmission of HIV. WHO, mandated to technically support and strengthen

ministries of health, looks forward to an ongoing collaboration with our partners, UNAIDS, UNICEF, CDC, USAID, and others from the non-governmental organization secto,r to try to ensure good and safe programs for mothers, including antiretroviral treatment.

Important Antenatal Interventions Other than HIV Prevention in Developing Country Settings

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I would like to try to provide some direction as to where we might go, rather than giving specific answers to questions. Let me start off by saying that antenatal care is care provided to a mother and fetus to detect and manage problems and to promote a healthy outcome for both the mother and the newborn. In the past, the emphasis has been on ritualistic rather than evidence-based practice. In fact, there are a number of things that we know right now are not that effective, but if you were to try to get them taken out by a randomized controlled trial, you simply would not be able to get it past your IRB.

Second, in reference to the five A's–that is, whether or not it is available, accessible, acceptable, affordable, and appropriate–antenatal care in many countries is in a deplorable status. To think that you can implement in many places the recommended regime right now is senseless, given the level of services that are currently available.

Let me provide some basic principles regarding antepartum and intrapartum intervention that might generally be thought of in trying to determine what a package might include. The first issue is whether or not you are going to use active versus passive surveillance for pregnancy. Do you expect women to come to you because they are pregnant and then provide them a service? In fact, what you might do is actively set up a system that would identify pregnant women and then take the service to them or facilitate their coming to the service.

The second component is applying the five W's of risk assessment in pregnancy, in congruence with local problems, practice, and capabilities. Those five W's are: Why am I doing it? Where am I doing it? When in the course of the pregnancy am I going to do it? Who is going to do it? And what technology is going to be employed in that process?

A third essential element is the recognition that we need to be able to account for the women and for the fetus and newborn, so that if we provide a service, we should find out at least what the outcome is rather than have it focus on process indicators.

And last, we must link postpartum intervention strategies, such as family planning, breast-feeding, folic acid, and such, with the antepartum or intrapartum interventions.

A review that occurred, I believe, in the late 1980s or early 1990s looking at the practices during antenatal care found that approximately 10 percent of them have a scientific

basis for conducting those interventions. If we look at some of the treatments that have evidence-based treatments (by looking through the Cochrane database and also referring to the recently published RHT Library prepared by WHO) there are maybe six or seven things that we could do that have the scientific evidence to say that if we do these things, in fact they are going to do what they are supposed to do: Tetanus toxoid immunization is one of them, as are syphilis screening and treatment, dealing with obstructive labor through surgical intervention, and arranging for clean delivery with a skilled attendant.

Although we have less specific data, clearly areas that could have effects on some outcomes of pregnancy would be anemia screening and treatment, malaria screening and treatment, and urinary tract infection screening and treatment. We need to look at those things and then what might be a package that could be put together to complement, or I might say lead to, the availability of antiretroviral treatment.

If we were to try to put that together, drawing on a package coming from a recent meeting held with UNAIDS and WHO, then we might include nutritional supplementation with iron. Although there really is no direct evidence that outcome is affected, maintaining an appropriate level of hemoglobin would be extremely important in women who have mid-range or very low hemoglobins.

We also would include screening for syphilis, treatment for hookworm, malaria prophylaxis, and vaccination against tetanus; counseling on where to give birth, preparation for birth, and advice on when to seek care; counseling on infant feeding options; advice on safer sex and benefits of voluntary counseling and testing; facilitation of a referral for voluntary counseling and testing; counseling on contraceptive use; and referral for support services.

The reality of the situation, however, is that in many of the places where you might anticipate implementing the regimen, this may be the initial contact. That is, if you were to actively set up a surveillance system for identifying women who might be HIV-positive in high-prevalence areas, then in fact this could very well be the initial contact. One question that might be asked is: What can I do to promote optimal health for mothers and infants when initial contact would be late in the third trimester?

I do not think this question has been appropriately asked of the different groups who would be able to come up with a consensus opinion, but let me take a shot at it. I would say the three I's: inoculate, investigate, and involve. Inoculate for tetanus toxoid, investigate for syphilis, and involve women in the important decisions that are going to be made with regard to who is going to help them in their birth and where it is going to be done.